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CORROSION SPEED MEASURING INSTRUMENT FOR REINFORCING BAR

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Application No. 62152214, **Filed** 19870618, **Published** 19881223

Abstract: PURPOSE: To measure the potential of a reinforcing bar by eliminating the influence of an IR drop, by measuring the potential of the reinforcing bar in a state that a current from a counter electrode does not flow to a galvanometer.

CONSTITUTION: A working pole 13 is connected to a reinforcing bar 3, and a probe 31 having a reference electrode 2 and a counter electrode 5 placed in a contact state is pressed against the surface of concrete 1 through a sponge which is contained an electrolyte. Subsequently, a value of a galvanometer 14 when a switch 15 is OFF is read, the switch 15 is set to ON, a current is injected to the reinforcing bar 3 from the counter electrode 5, and a variable resistance is adjusted so that the value of the galvanometer 14 goes to equal. The variable resistance 12 is adjusted so that the value of the galvanometer 14 is not varied, even if the switch 15 is set to OFF quickly. ON and OFF are repeated, and when the balance is taken, the switch 15 is set to ON again, and after a prescribed time has elapsed, a value of a potential measuring part 14 is read. The same measurement is executed by changing the injecting current flowing from the counter electrode 5 to the reinforcing bar 3.

Int'l Class: G01N02746; G01N01700 G01N02700 G01N02726

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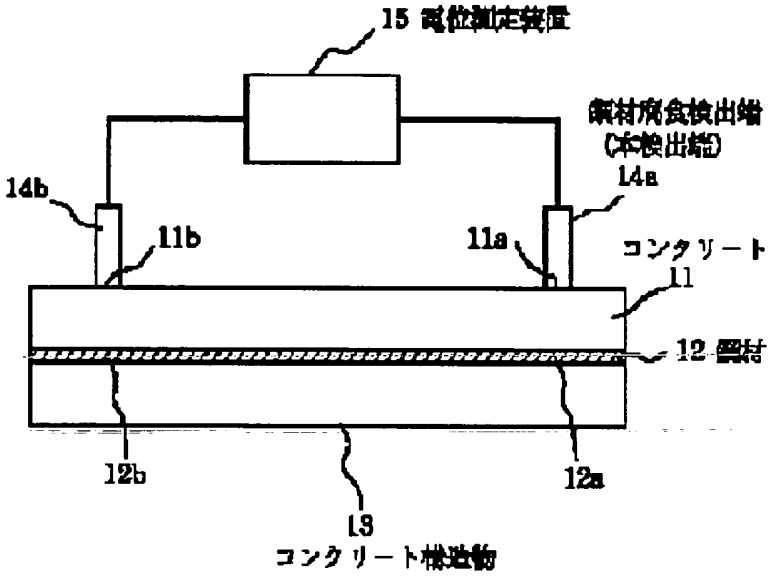

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DETECTING METHOD FOR STEEL MATERIAL CORROSION IN CONCRETE

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Abstract: PROBLEM TO BE SOLVED: To provide a method to accurately detect the corroded condition of steel material in concrete, in which there is no need to connect conductors with the steel material in concrete.

SOLUTION: A concrete structure 13 includes steel material 12 set in concrete 11, and at the surface of the concrete 11, two or more steel corrosion sensing ends 14a and 14b equipped with electrode are installed in contacting at certain intervals, and a potential measuring device 15 measures the difference in the natural potential between the steel materials 12a and 12b in concrete 11a/11b at two or more places. This allows detecting the corroded situation of the reinforcing bars in the concrete.

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